



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,756	07/24/2007	Murray Edward Bruce Leighton	769-399	3380
51468 7590 06/24/2010				
DAY PITNEY LLP				
ACCOUNT: ILLINOIS TOOL WORKS INC.				
7 TIMES SQUARE				
NEW YORK, NY 10036-7311				
EXAMINER				
GOFF II, JOHN L				
ART UNIT		PAPER NUMBER		
1791				
MAIL DATE		DELIVERY MODE		
06/24/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/593,756

Applicant(s)LEIGHTON, MURRAY EDWARD
BRUCE**Examiner**

John L. Goff

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 5/12/10
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to the amendment filed on 5/3/10.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

3. Claims 7 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Herrington (U.S. Patent 5,088,971).

Herrington discloses an apparatus comprising a first half of a clamp (40, 41), a second half of a clamp (40, 41), and a probe (45) movable between a first position which in use it is clear of engaged profile lengths and a second position in which it has penetrated into the material of an end portion.

As to the “means for receiving a pair of zipper profile lengths in engagement with each other over at least over an end portion at which the profiles are to be joined”, this claim limitation is considered to invoke 35 USC 112 sixth paragraph and has been treated as such. The first half of the clamp (40, 41), e.g. the left half of the clamp in Figure 1, is capable of performing the identical function of the claimed means, i.e. receiving a pair of zipper profile lengths in engagement with each other over at least an end portion at which the profiles are to be joined, such that the first half of the clamp is considered an equivalent means.

As to the “means for heating the probe”, this claim limitation is considered to invoke 35 USC 112 sixth paragraph and has been treated as such. Herrington teaches a heating element

(45a) comprising an electrical heating element within a non-front considered rear portion of the probe which element is capable of performing the identical function of the claimed means, i.e. heating the probe, such that the element is considered an equivalent means.

As for the “means for applying external pressure to the zipper profile end portions when the probe is in its first position”, this claim limitation is considered to invoke 35 USC 112 sixth paragraph and has been treated as such. The second half of the clamp (40, 41), e.g. the right half of the clamp in Figure 1, is capable of performing the identical function of the claimed means, i.e. applying external pressure to the zipper profile end portions when the probe is in its first position, such that the second half of the clamp is considered an equivalent means.

Regarding the limitation of “for joining the ends of a pair of zipper profiles”, “for receiving a pair of zipper profile lengths in engagement with each other over at least over an end portion at which the profiles are to be joined”, “which is movable between a first position in which, in use, it is clear of the engaged profile lengths and a second position in which it has penetrated into the material of the end portions”, “for heating the probe”, and “for applying external pressure to the zipper profile end portions when the probe is in its first position”, these limitations are directed to either the material worked upon or the intended use of the apparatus. “Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim.” (MPEP 2115). The apparatus taught by Herrington is capable of working upon the materials claimed, i.e. a pair of zipper profiles. A claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art

apparatus” if the prior art apparatus teaches all the structural limitations of the claim (MPEP 2114). The apparatus taught by Herrington includes all of the claimed structure of the claims, i.e. means for receiving, probe, means for heating, and means for applying, which structure is capable of the claimed intended use.

4. Claims 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson (U.S. Patent 3,388,021).

Johnson discloses an apparatus comprising supports (22, 23), support clamping means not shown, and a probe (24) movable between a first position in which it is clear of engaged profile lengths and a second position in which it has penetrated into the material of the end portion of the profile lengths (Figures 1, 8, and 14 and Column 4, lines 4-64).

As to the “means for receiving a pair of zipper profile lengths in engagement with each other over at least over an end portion at which the profiles are to be joined”, this claim limitation is considered to invoke 35 USC 112 sixth paragraph and has been treated as such. The supports (22, 23) are capable of performing the identical function of the claimed means, i.e. receiving a pair of zipper profile lengths in engagement with each other over at least an end portion at which the profiles are to be joined, such that the support are considered an equivalent means. It is further noted a single support (22 or 23) is also an equivalent means.

As to the “means for heating the probe”, this claim limitation is considered to invoke 35 USC 112 sixth paragraph and has been treated as such. Johnson teaches a heating element (79) comprising an electrical heating element in a non-front considered rear portion of the probe which element is capable of performing the identical function of the claimed means, i.e. heating the probe, such that the element is considered an equivalent means.

As for the “means for applying external pressure to the zipper profile end portions when the probe is in its first position”, this claim limitation is considered to invoke 35 USC 112 sixth paragraph and has been treated as such. The support clamping means is capable of performing the identical function of the claimed means, i.e. applying external pressure to the zipper profile end portions when the probe is in its first position, such that the support clamping means are considered an equivalent means. It is further noted the other single support (22 or 23) not used as the means for receiving is also an equivalent means for applying external pressure.

Regarding the limitation of “for joining the ends of a pair of zipper profiles”, “for receiving a pair of zipper profile lengths in engagement with each other over at least over an end portion at which the profiles are to be joined”, “which is movable between a first position in which, in use, it is clear of the engaged profile lengths and a second position in which it has penetrated into the material of the end portions”, “for heating the probe”, and “for applying external pressure to the zipper profile end portions when the probe is in its first position”, these limitations are directed to either the material worked upon or the intended use of the apparatus. “Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim.” (MPEP 2115). The apparatus taught by Johnson is capable of working upon the materials claimed, i.e. a pair of zipper profiles. A claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim (MPEP 2114). The apparatus taught by Johnson includes all of the claimed structure of the claims, i.e.

means for receiving, probe, means for heating, and means for applying, which structure is capable of the claimed intended use.

Regarding claim 8, the probe taught by Johnson is capable of moving between its first and second position in a direction substantially longitudinally of the profiles.

5. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Crevier (EP 1364768).

Crevier discloses a method of joining an end of a pair of zipper profiles comprising bringing the zipper profiles into engagement with each other (12) at least over an end portion at which the profiles are to be joined, applying an ultrasonic horn (45) to the end portions of the zipper profiles wherein the horn is necessarily heated as a result of vibration considered introducing a heated probe into the engaged end portions of the zipper profiles and a flattened indentation in the portions results (28, 30) considered in order to form a recess in the zipper profile material in the region of the probe, withdrawing the probe, and after the step of withdrawing the probe, applying external pressure (34, 36) to the end portion of the zipper (Figures 1 and 6-9 and Paragraphs 0036-0044).

Regarding claim 2, during the step of applying external pressure the pressure is applied in the absence of external heat.

Regarding claim 3, during the step of applying external pressure the pressure applied is the sole external means of joining the profile end portions.

Claim Rejections - 35 USC § 103

6. Claims 1-4 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (Applicants specification pages 1-2) in view of Johnson.

The admitted prior art discloses it was known to join an end of a pair of plastic zipper profiles by bringing the zipper profiles into engagement with each other at least over an end portion at which the profiles are to be joined and applying external heat and external pressure to the end portion of the zipper (Specification page 1, line 3 to page 2, line 6). The admitted prior art does not teach applying the heat by introducing a heated probe. It was known in the art to join an end of a pair of plastic profiles (20, 21) by bringing the profiles into engagement with each other at least over an end portion at which the profiles are to be joined, applying external pressure (via supports 22 and 23 and support clamping means not shown) to the end portion, introducing a heated probe (24) into the engaged end portions of the profiles in order to form a recess in the profile material in the region of the probe, withdrawing the probe, and continuing to apply external pressure to the end portions of the profiles until the portions cool as shown by Johnson. Johnson teaches internally applying the heat via the heated probe reduces the heating duration required as compared to when the heat is externally applied (Column 1, lines 36-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the heat to the end portion of the zipper as taught by the admitted prior art using the heated probe as shown by Johnson to reduce the heating duration.

Regarding claim 2, the external pressure applied until the portions cool is in the absence of external heat. Regarding claim 3, the sole external means of joining the profile end portions during the step of cooling is the pressure applied. Regarding claim 4, the probe is introduced

into the profile end portions in a direction substantially longitudinally of the profile lengths as shown by Johnson (Figure 2). Regarding claims 7-9, Johnson teaches the means claimed as more fully set forth above. Regarding claims 6 and 10, the admitted prior art as modified by Johnson teaches a method and apparatus for joining an end of a pair of plastic zipper profiles. The admitted prior art is silent to joining the other end either simultaneously or sequentially. It would have been obvious to one of ordinary skill in the art at the time the invention was made performing the admitted prior art as modified by Johnson to join the other end of the pair of plastic zipper profiles either simultaneously with or subsequent to joining the first end wherein simultaneously joining obviously requires a second apparatus but has the improvement of faster joining and sequentially joining obviously does not require a second apparatus but has the disadvantage of joining taking twice as long. It is noted a second apparatus in the admitted prior art as modified Johnson includes the probe, heating means, and external pressure means near, i.e. at, an end of the receiving means of the first apparatus opposite the end of the receiving means near the first probe.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art and Johnson as applied to claims 1-4 and 6-10 above, and further in view of Mojonnier et al. (U.S. Patent 3,600,248).

The admitted prior art and Johnson as applied above teach melting the plastic profiles to form the recess without a specific recitation of vaporizing the profile materials. It was known in the art of melting plastic profiles to join the profiles together using a heating element that contacts the profiles that the profile material is at least vaporized in the region of the element to prevent the plastic from sticking to the element as shown by Mojonnier (Column 3, lines 43-52).

It would have been obvious to one of ordinary skill in the art at the time the invention was made performing the method taught by the admitted prior art as modified by Johnson to heat the plastic profiles at least until they vaporize within the region of the heated probe to prevent the plastic profile material from sticking to the probe as suggested by Mojonnier.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Crevier in view of Mojonnier.

Crevier is described above in full detail. Crevier is silent as to a specific recitation of vaporizing the profile materials. It was known in the art of flowing/melting plastic profiles to join the profiles together using a heating element that contacts the profiles that the profile material is at least vaporized in the region of the element to prevent the plastic from sticking to the element as shown by Mojonnier. It would have been obvious to one of ordinary skill in the art at the time the invention was made performing the method taught Crevier to ultrasonically heat the plastic profiles at least until they vaporize within the region of the horn to prevent the plastic profile material from sticking to the horn as suggested by Mojonnier.

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Crevier.

Crevier is described above in full detail. Crevier teaches a method for joining an end of a pair of plastic zipper profiles. Crevier is silent to joining the other end either simultaneously or sequentially. It would have been obvious to one of ordinary skill in the art at the time the invention was made performing Crevier to join the other end of the pair of plastic zipper profiles either simultaneously with or subsequent to joining the first end wherein simultaneously joining obviously requires a second joining apparatus but has the improvement of faster joining and

sequentially joining obviously does not require a second apparatus but has the disadvantage of joining taking twice as long.

Response to Arguments

10. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues, "The Office Action rejected Claims 1-3, 7 and 9 under 35 U.S.C. §102(b) as being anticipated by the Herrington reference (U.S. Patent No. 5,088,971). In the Herrington reference, "the hot knife 45 is plunged into the profiles, the heat from the knife causes the profile material to become molten so that it will be forced into the pockets ... in the clamps 40 and 41 by the inclined faces of the knife blade After the end stops 30 have been formed on the zipper 11 the hot knife 45 is retracted upwardly in the direction of the arrow d and the clamps 40 and 41 are moved out of engagement with the zipper as indicated by the arrows b-b" (col. 4, lines 47-59). This is quite different from the presently pending claims in that newly-amended Claim 1 recites "after the step of withdrawing the probe, applying external pressure to the end portion of the zipper". Similarly, newly-amended Claim 7 recites "means for applying external pressure to the zipper profile end portions when the probe is in its first position".

Herrington teaches a method different from that of claim 1 such that Herrington is not applied to reject the claim as amended. However, claim 7 is an apparatus claim. A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim (MPEP 2114). The apparatus taught

by Herrington includes all of the claimed structure of the “means for applying external pressure to the zipper profile and portions when the probe is in its first position” such as the second half of the clamp (40, 41), e.g. the right half of the clamp in Figure 1, and the structure itself is capable of applying external pressure to the zipper profile end portions when the probe is in its first position.

Applicant further argues, “The Johnson reference appears to disclose the sealing of edges of opposing panels of a package and does not disclose the structure of newly-amended Claim 7 which recites “means for applying external pressure to the zipper profile end portions when the probe is in its first (i.e. withdrawn) position”. It is respectfully submitted that the amendment of this quoted language to recite the first position rather than the second position obviates the reasoning of the second full paragraph of numbered page 6 of the Office Action.”.

Johnson teaches an apparatus including the claimed structure as more fully set forth above in the rejection, it being further noted Johnson expressly depicts in Figure 1 the support clamping means or alternatively a single support (22 or 23) includes the claimed means as the apparatus is depicted as applying external pressure when the heated probe is in its first position.

Applicant further argues, “The Office Action rejected Claims 1-4 and 6-10 under 35 U.S.C. §103(a) over the alleged admitted prior art and the Johnson reference. Similarly, the Office Action rejected Claim 5 over the alleged admitted prior art and the John reference, and further in view of the Mojonner reference (U.S. Patent No. 3,600,248). It is respectfully submitted that neither the cited portions of the specification of the instant application, the Mojonner reference or the Johnson reference disclose or suggest the language of Claim 1 – “after the step of withdrawing the probe, applying external pressure to the end portion of the

zipper” -- or the language of Claim 7 – “means for applying external pressure to the zipper profile end portions when the probe is in its first position”. Similarly, neither the cited portions of the specification of the instant application or the Johnson reference disclose or suggest the language of newly-amended Claims 1 and 7 regarding the movement of the probe “in a direction substantially longitudinally of the zipper profiles”.”.

Johnson teaches applying external pressure to the end portion until the portion cools to meet the limitation of amended claim 1. Johnson does also teach applying pressure prior to introducing the heated probe. However, claim 1 does not preclude the application of pressure prior to withdrawing the probe. Johnson teaches the probe is introduced in a direction substantially longitudinally of the end profiles as shown in Figure 2 wherein the admitted prior art as modified by Johnson is considered to join the end of the zipper profiles in the same manner.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John L. Goff** whose telephone number is (571)272-1216. The examiner can normally be reached on M-F (7:15 AM - 3:45 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John L. Goff/
Primary Examiner, Art Unit 1791

